

**CALIFORNIA ENERGY COMMISSION  
HVAC Upgrade  
C-Lease Real Estate, Inc. Project Summary**

**Project Description:**

Two 222-ton chillers in the C-Lease Real Estate Inc. central plant were replaced with a 300-ton unit and a 108-ton unit. At the same time, the building's main air handler was converted from a constant volume to a variable volume system.

The previous constant volume air system maintained a steady kilowatt demand. The new system incorporates a variable frequency drive that modulates the airflow when the demand for cooling increases or decreases. In the Long Beach area, it is expected that the average speed of the fan during the on-peak periods will be 80%.



**Project Results:**

The maximum demand of the old chillers combined was 388 kilowatts, while the demand of the replacement chillers is only 241 kilowatts. The new system delivers the same 409 tons of cooling as the old system. They were able to maintain normal comfort levels while saving 147 kilowatts.

Description	Kilowatt (kW) Reduction
Chiller System	122 kW
Air Handler systems	25 kW
<b>Energy Demand Reduction</b>	<b>147 kW</b>

**Funding Details:**

The Energy Commission provided an award of \$31,500.00 toward the total project cost of \$400,000. Simple payback is estimated at 36 months.

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